

	10			15				20				25				30									
Human	S	N	R	V	F	L	C	Q	E	S	K	V	T	E	I	P	S	D	L	P	R	N	A	I	E
Rat	-	-	-	-	-	-	-	-	D	-	-	-	-	-	-	-	T	-	-	-	-	-	-	-	-
Bovine	-	-	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	-	V	-
Horse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-
Sheep	-	-	G	-	-	-	-	-	D	-	-	-	-	-	M	-	-	-	-	-	-	D	-	V	-
Pig	-	-	G	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	-	-	-	-	V	-
hLHR	P	E	P	C	N	C	V	P	D	G	A	L	R	C	P	G	P	T	A	G	L	T	R	L	S
hTSHR	H	Q	E	E	D	F	R	V	T	C	-	D	I	Q	R	I	P	S	-	-	P	S	T	Q	T

Fig. 1

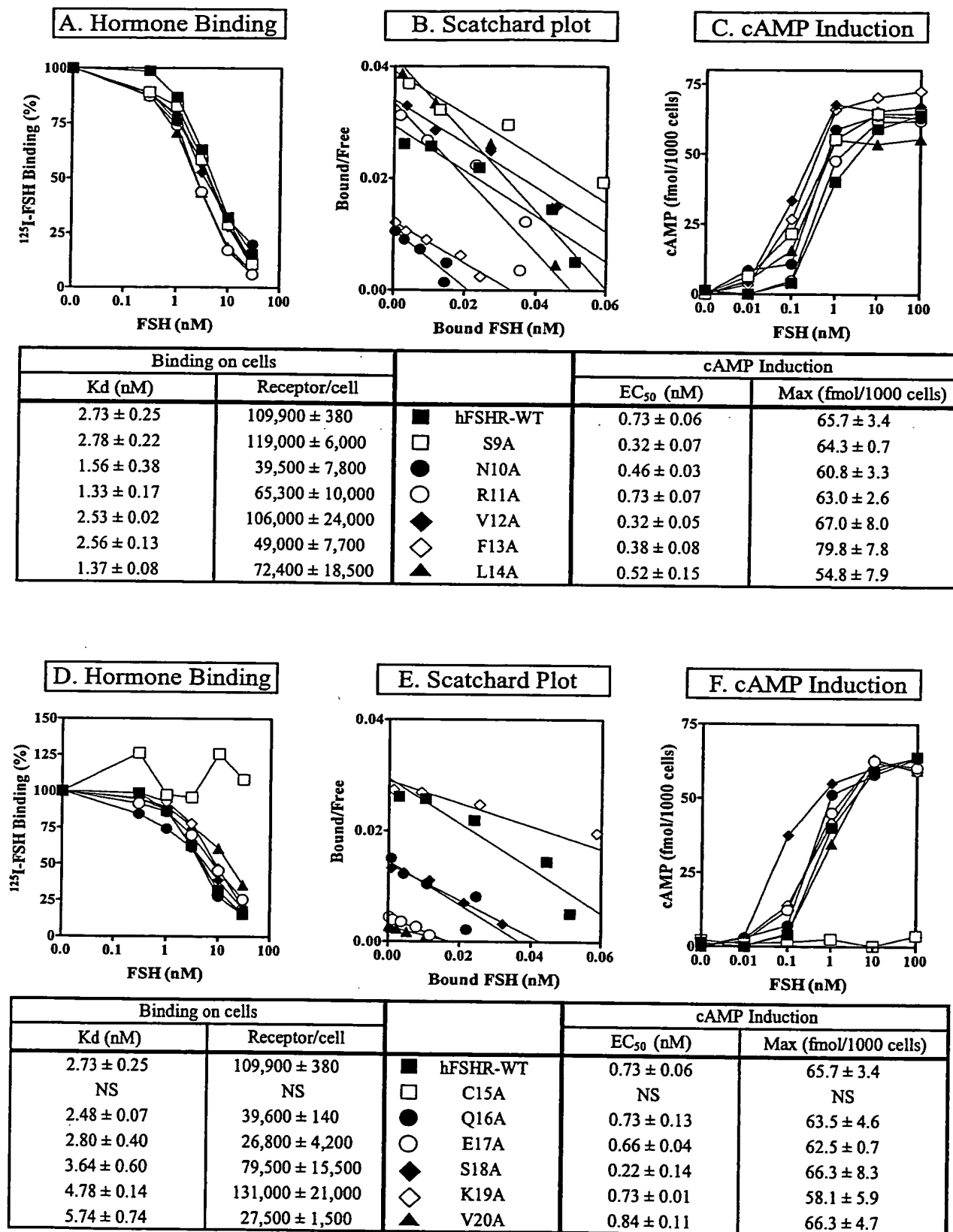


FIG. 2

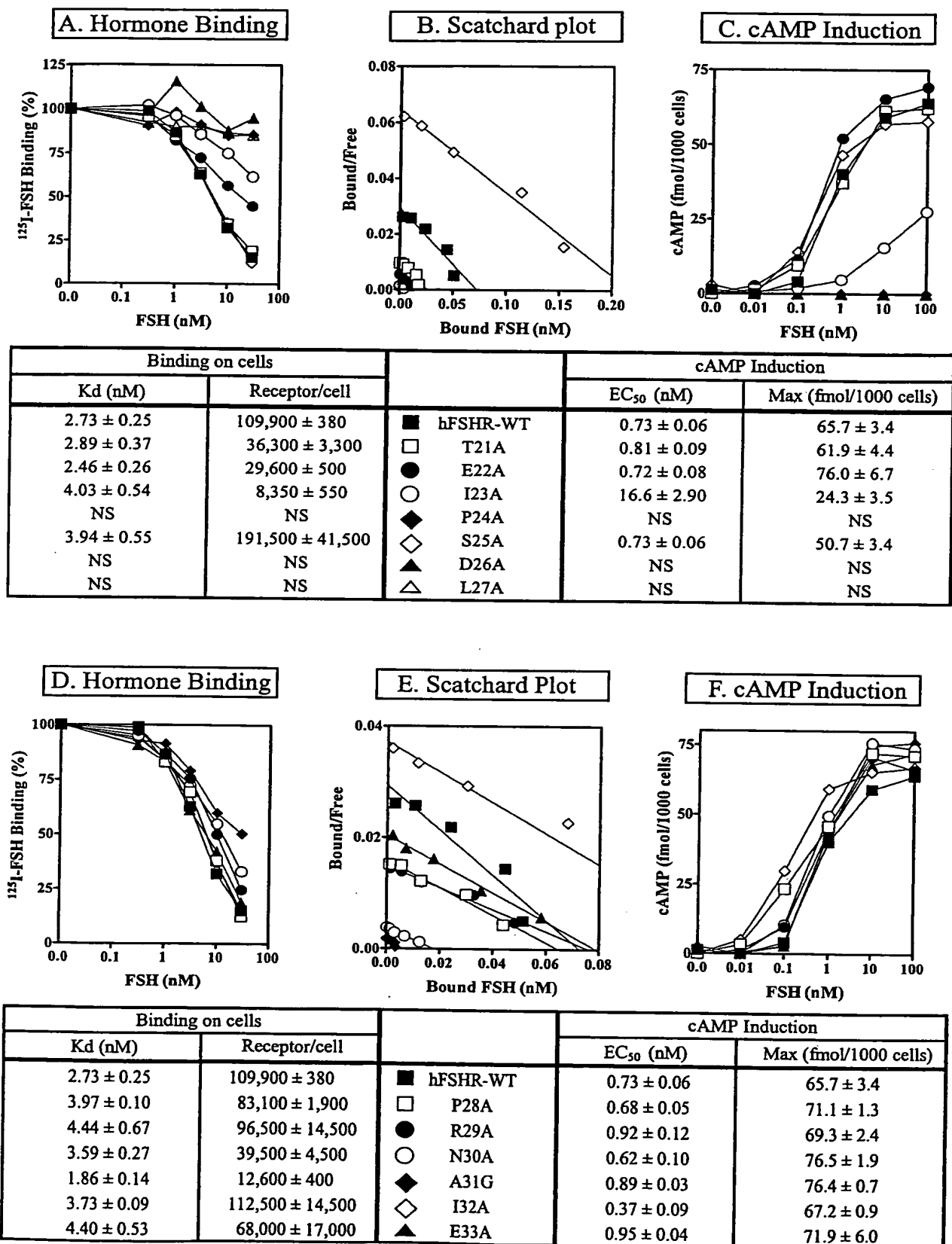


FIG. 3

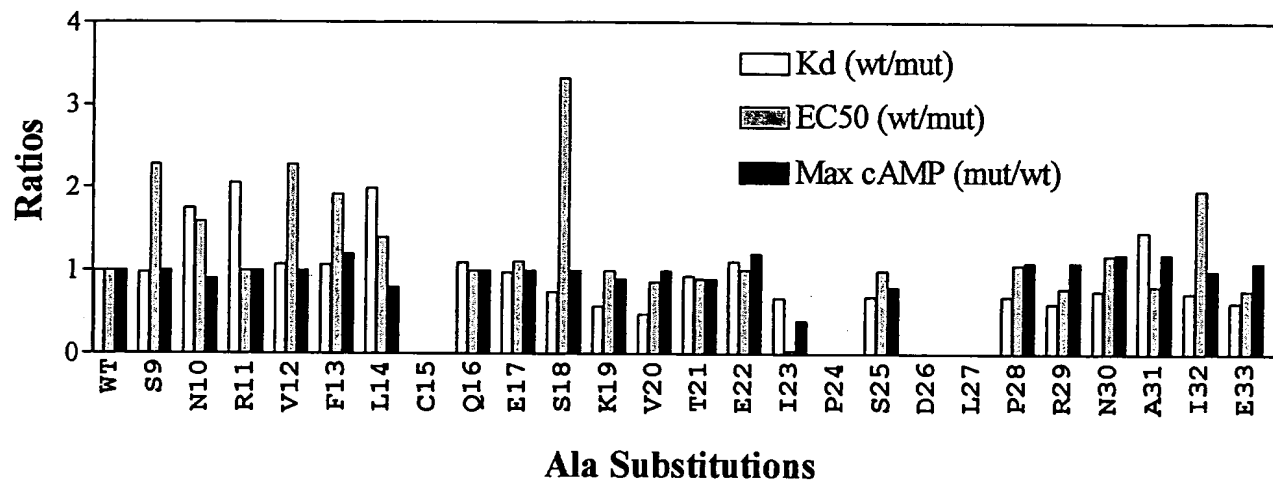


FIG. 4

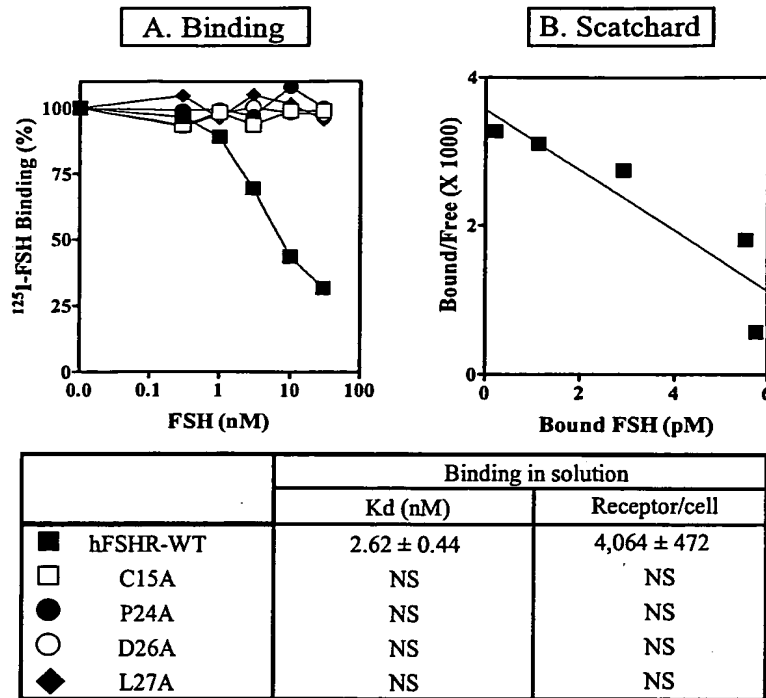


FIG. 5

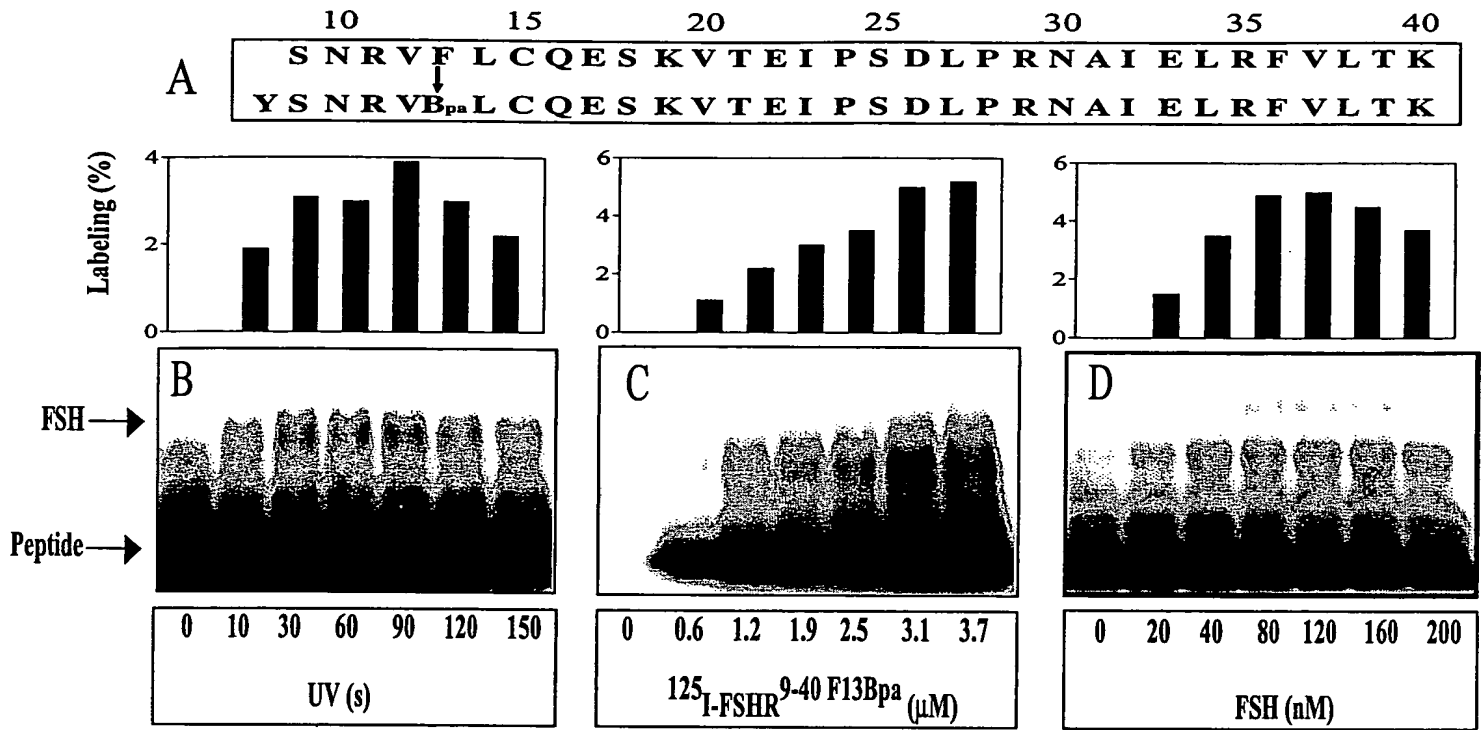
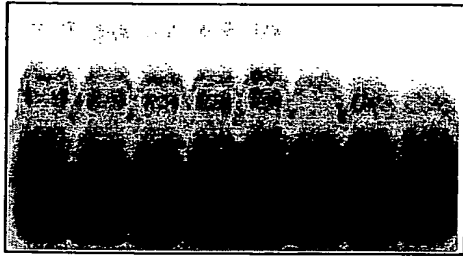
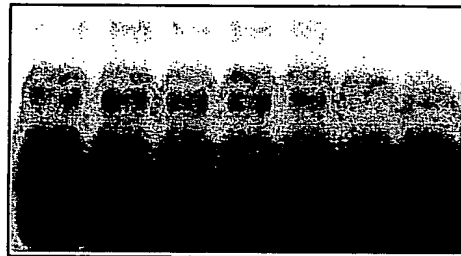


FIG. 6

**Labeling Inhibition**

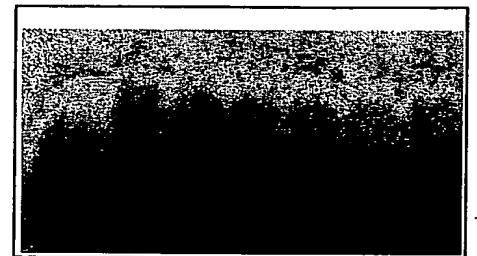


0 0.2 0.4 0.8 1.6 3.1 6.2 12.4  
 FSHR<sup>9-40</sup> (μM)



0 0.2 0.4 0.8 1.6 3.1 6.2  
 FSHR<sup>9-40</sup> F13Bpa (μM)

**Labeling of other proteins**



None PLA GH TSH  
 FSH Urokinase LH

FIG. 7

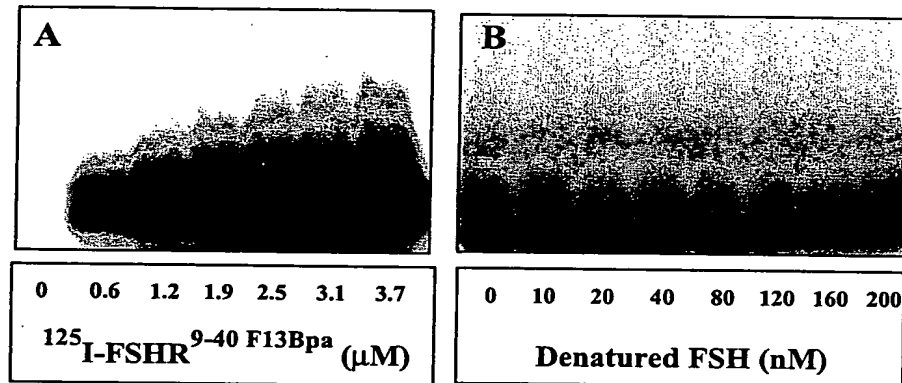


FIG. 8



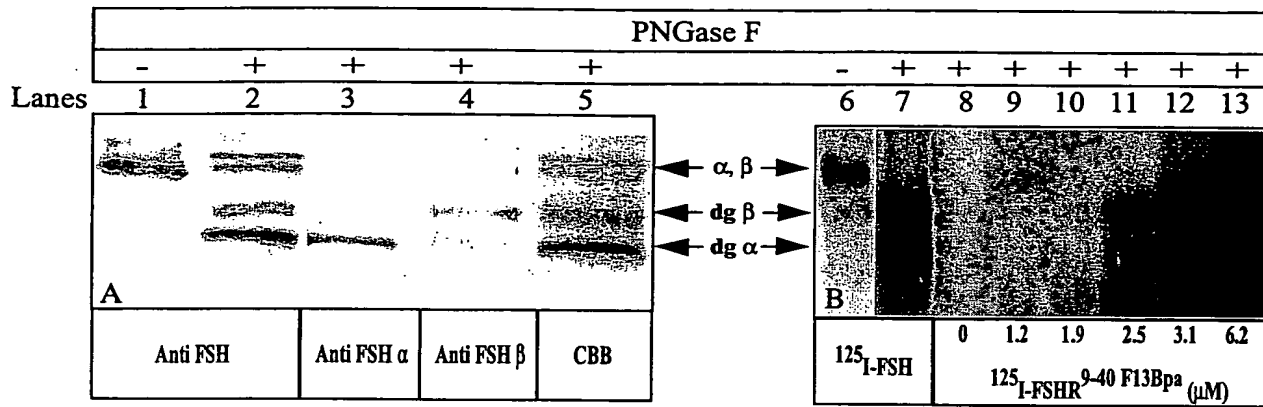


FIG. 9

FSHR (human)	KVPLITVSKAK
FSHR (Rat)	-----
FSHR (mouse)	-----
FSHR (bovine)	-----S-
FSHR (pig)	-----S-
FSHR (sheep)	-----S-
FSHR (Horse)	-----S-
FSHR (chick)	R-----S-
FSHR (Equas)	--A-----S-
LHR (human)	-----TNS-
LHR (Rat)	-----TNS-
LHR (mouse)	-----TNS-
LHR (bovine)	-----TNS-
LHR (pig)	-----TNS-
LHR (sheep)	-----TNS-
LHR (carja)	-M-----TNS-
TSHR (human)	NK-----NS-
TSHR (Rat)	NK-----TNSG
TSHR (mouse)	NK-----TNS-
TSHR (bovine)	NK-----TNS-
TSHR (pig)	NK-----TNS-
TSHR (sheep)	NK-----TNS-
TSHR (Canfa)	NK-----TNS-

FIG. 10

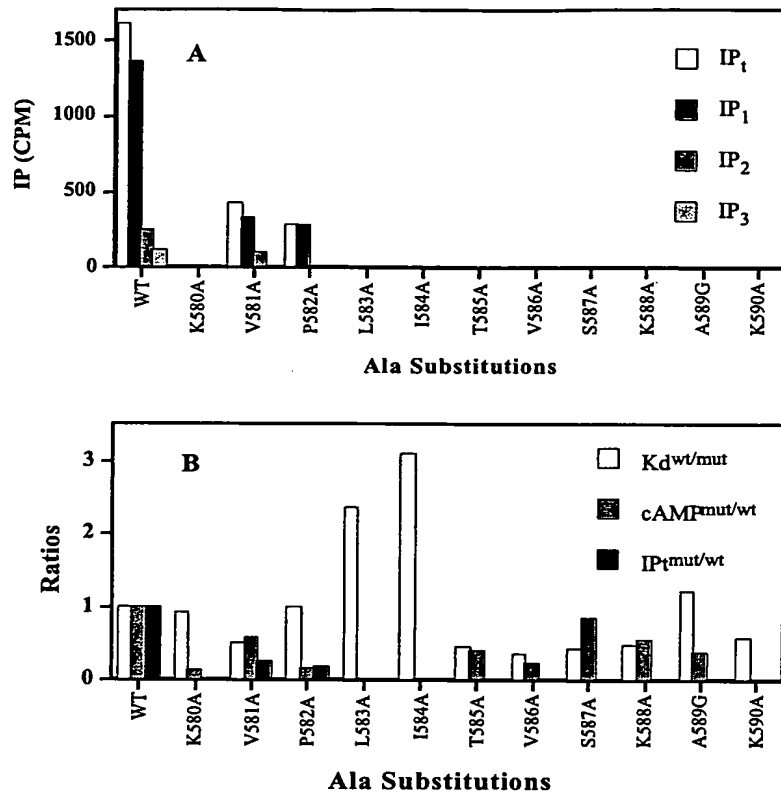


FIG. 11

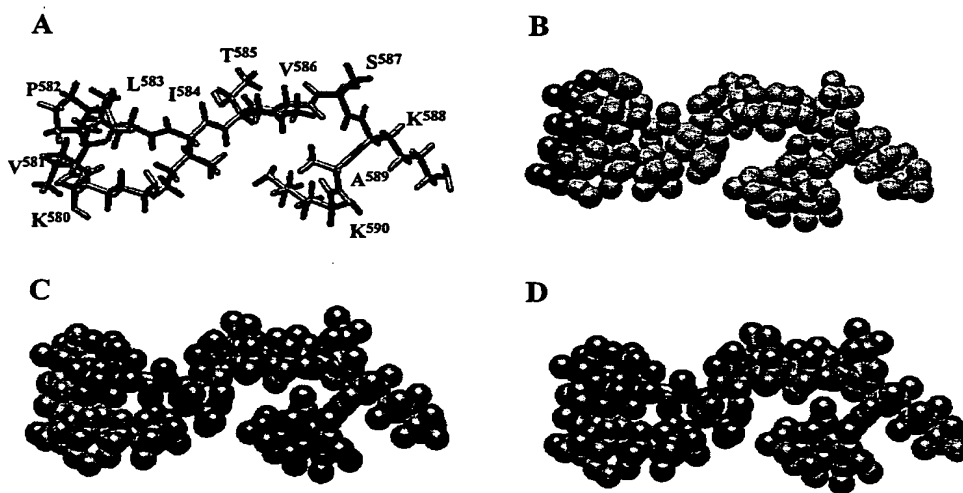
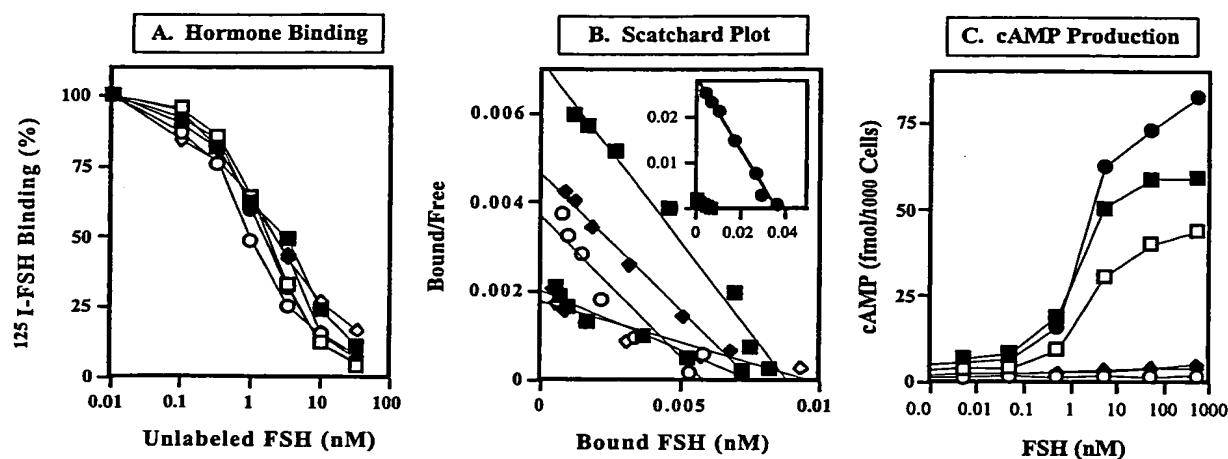
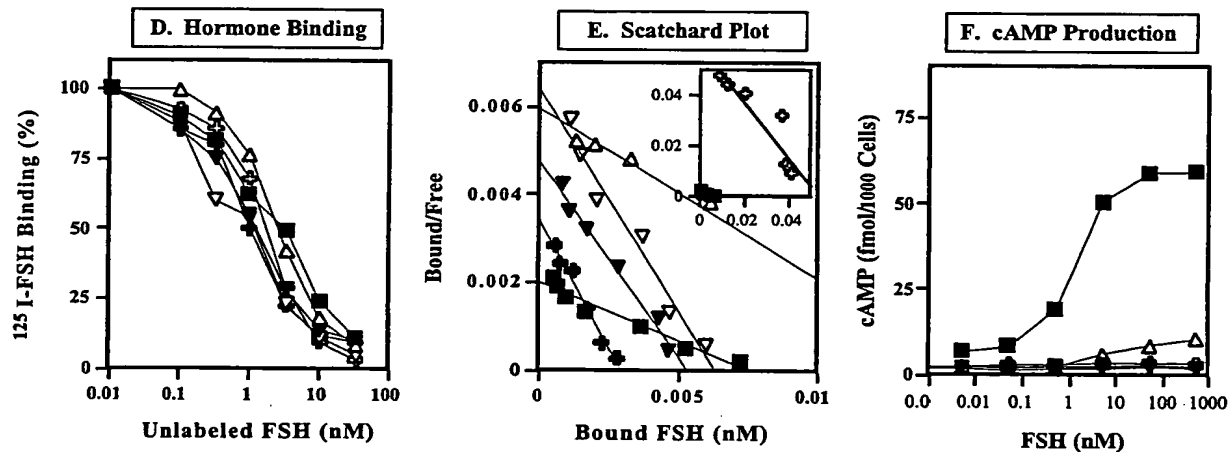


FIG. 12

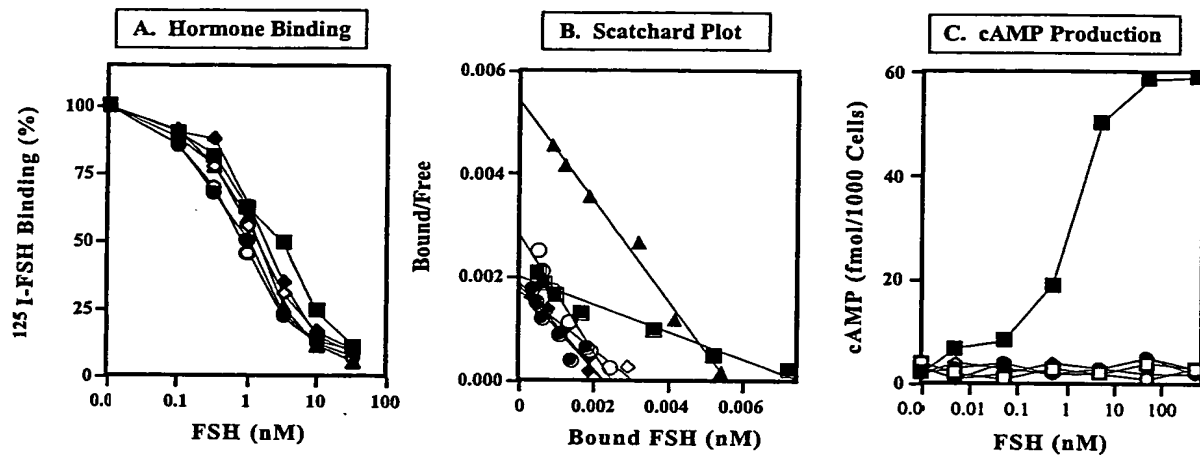


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) L <sup>583</sup>	1.6 ± 0.2	59 ± 4
1.4 ± 0.1	14,400 ± 3,400	□ F	2.9 ± 1.1	44 ± 3
1.3 ± 0.1	55,400 ± 7,300	● Y	2.6 ± 0.3	83 ± 12
1.6 ± 0.1	9,000 ± 1,000	○ P	NS	NS
1.7 ± 0.4	12,200 ± 1,000	◆ A	NS	NS
3.9 ± 0.5	10,500 ± 5,900	◇ C	NS	NS

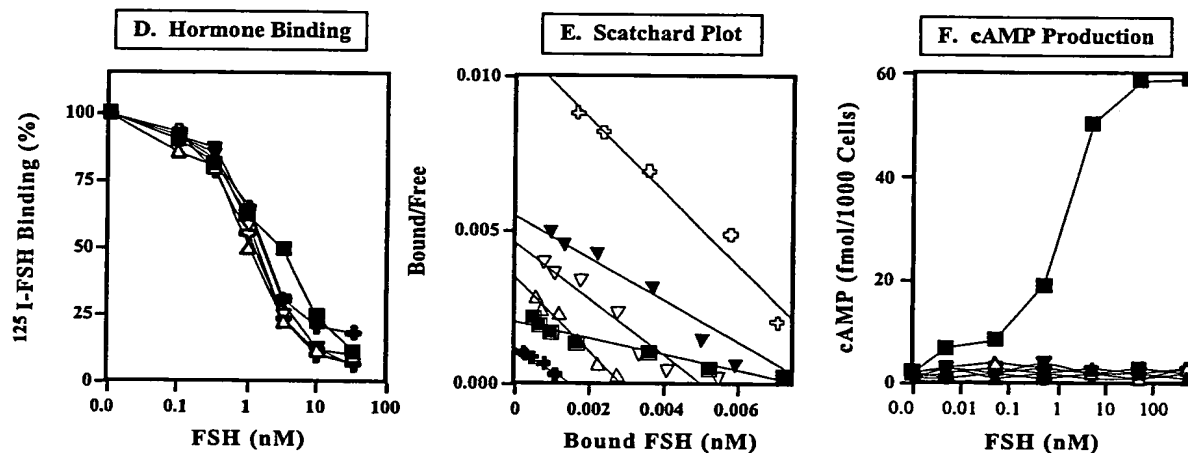


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) L <sup>583</sup>	1.6 ± 0.2	59 ± 4
2.1 ± 0.1	23,600 ± 1,700	△ Q	14 ± 1.1	7 ± 5
1.2 ± 0.1	9,000 ± 2,300	▼ D	NS	NS
1.0 ± 0.1	10,100 ± 1,700	▽ E	NS	NS
1.0 ± 0.1	4,900 ± 2,200	✦ R	NS	NS
0.9 ± 0.1	82,000 ± 5,900	✧ del	NS	NS

FIG. 13

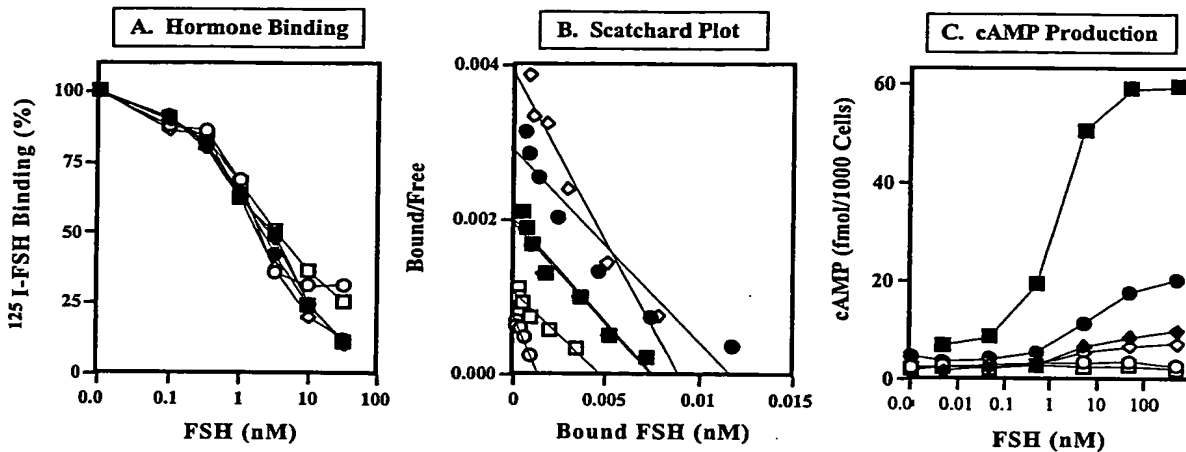


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) I <sup>584</sup>	1.6 ± 0.2	59 ± 4
1.2 ± 0.1	3,000 ± 800	● Y	NS	NS
0.7 ± 0.1	3,500 ± 400	○ P	NS	NS
1.3 ± 0.3	4,100 ± 1,000	◆ A	NS	NS
1.8 ± 0.2	4,100 ± 1,400	◇ C	NS	NS
1.0 ± 0.1	8,100 ± 300	▲ S	NS	NS

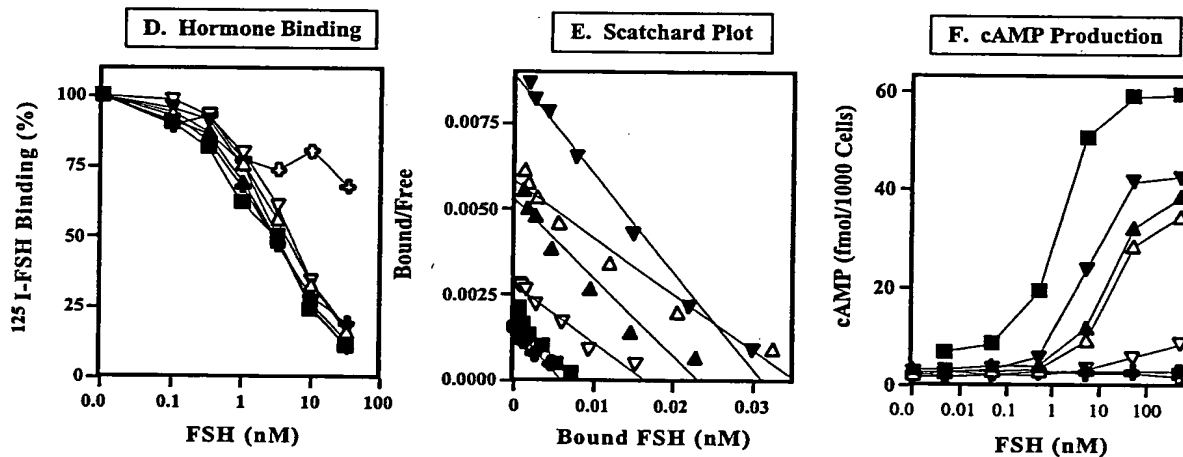


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) I <sup>584</sup>	1.6 ± 0.2	59 ± 4
0.8 ± 0.1	4,000 ± 500	△ Q	NS	NS
1.3 ± 0.2	10,800 ± 2,200	▼ D	NS	NS
1.1 ± 0.1	7,200 ± 500	▽ E	NS	NS
1.4 ± 0.1	2,500 ± 800	⊕ R	NS	NS
0.8 ± 0.02	14,000 ± 3,300	⊕ del	NS	NS

FIG. 14

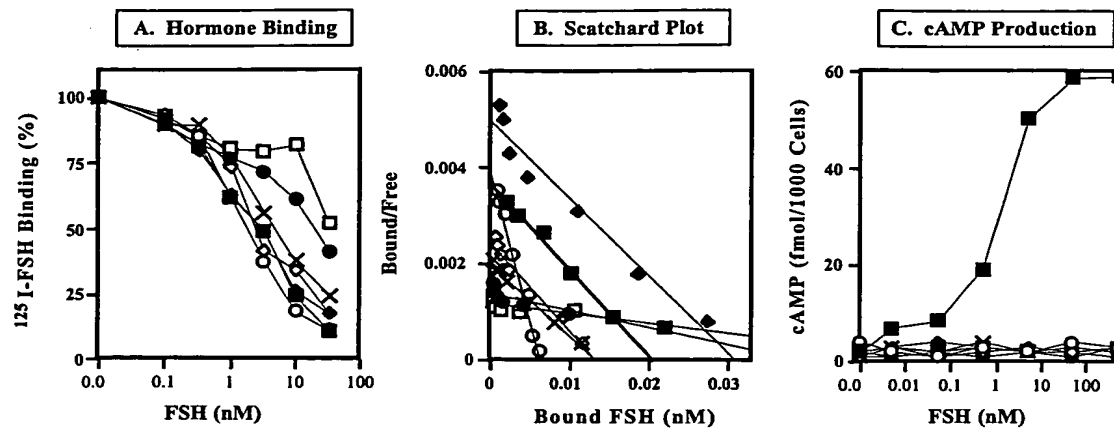


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC50 (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) p582	1.6 ± 0.2	59 ± 4
4.7 ± 1.0	7,100 ± 1,500	□ F	NS	NS
4.3 ± 1.1	17,100 ± 3,100	● Y	5.2 ± 3.4	20 ± 4
1.9 ± 0.5	2,900 ± 800	○ L	NS	NS
4.0 ± 1.0	12,000 ± 3,200	◆ A	2.9 ± 0.9	10 ± 2
2.4 ± 0.5	14,000 ± 2,300	◇ C	1.9 ± 0.6	7.2 ± 0.8

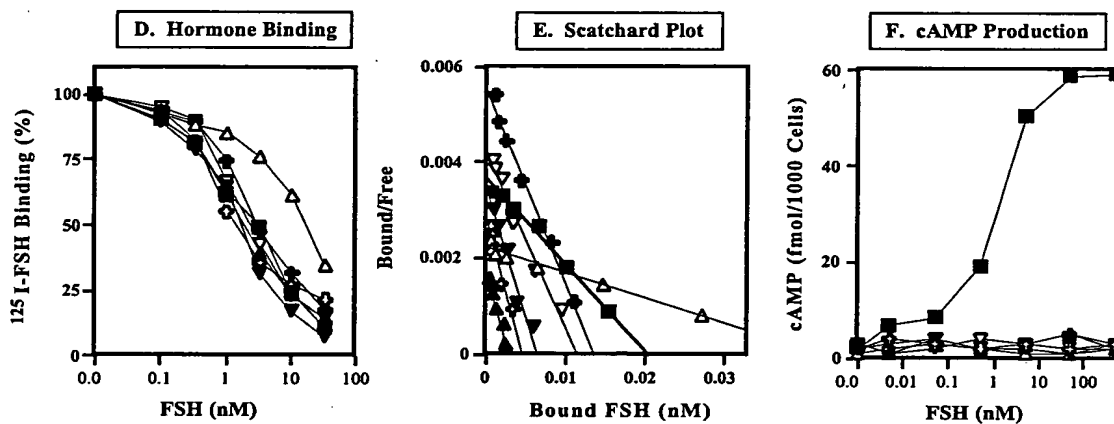


Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC50 (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) p582	1.6 ± 0.2	59 ± 4
4.5 ± 0.3	36,000 ± 5,600	▲ S	17.6 ± 3.7	38 ± 14
6.2 ± 1.1	52,500 ± 7,100	△ Q	19.7 ± 1.2	35 ± 8
3.6 ± 0.3	47,100 ± 9,300	▼ D	4.8 ± 1.4	42 ± 6
6.5 ± 1.6	26,000 ± 5,300	▽ E	16 ± 5	8 ± 1.2
4.1 ± 0.6	8,200 ± 3,400	⊕ R	NS	NS
NS	NS	⊕ del	NS	NS

FIG. 15



Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) K <sup>590</sup>	1.6 ± 0.2	59 ± 4
50.1 ± 11	75,200 ± 13,800	□ F	NS	NS
28.7 ± 3.8	43,000 ± 2,500	● Y	NS	NS
1.9 ± 0.2	11,300 ± 1,600	○ P	NS	NS
6.9 ± 2.0	47,000 ± 7,300	◆ A	NS	NS
5.9 ± 1.2	20,800 ± 4,700	◇ C	NS	NS
7.2 ± 1.6	21,700 ± 4,700	× L	NS	NS



Binding			cAMP Induction	
Kd (nM)	Receptor/Cell		EC <sub>50</sub> (pM)	Max (fmol)
4.0 ± 0.5	12,100 ± 2,400	■ (wt) K <sup>590</sup>	1.6 ± 0.2	59 ± 4
2.1 ± 0.5	4,900 ± 600	▲ S	NS	NS
19.6 ± 2.9	58,700 ± 9,900	△ Q	NS	NS
1.9 ± 0.4	10,300 ± 4,300	▼ D	NS	NS
2.9 ± 0.3	16,900 ± 4,000	▽ E	NS	NS
2.9 ± 0.5	20,000 ± 5,600	⊕ R	NS	NS
1.6 ± 0.3	6,500 ± 1,300	⊕ del	NS	NS

FIG. 16



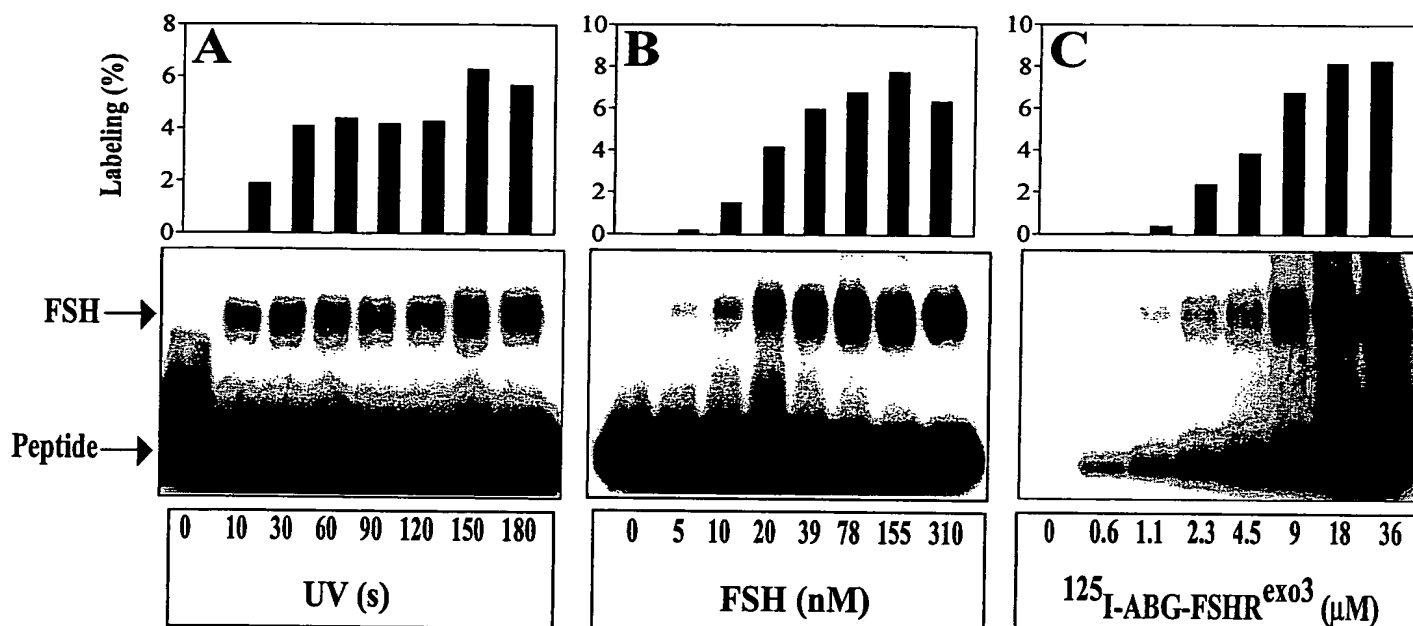


FIG. 17

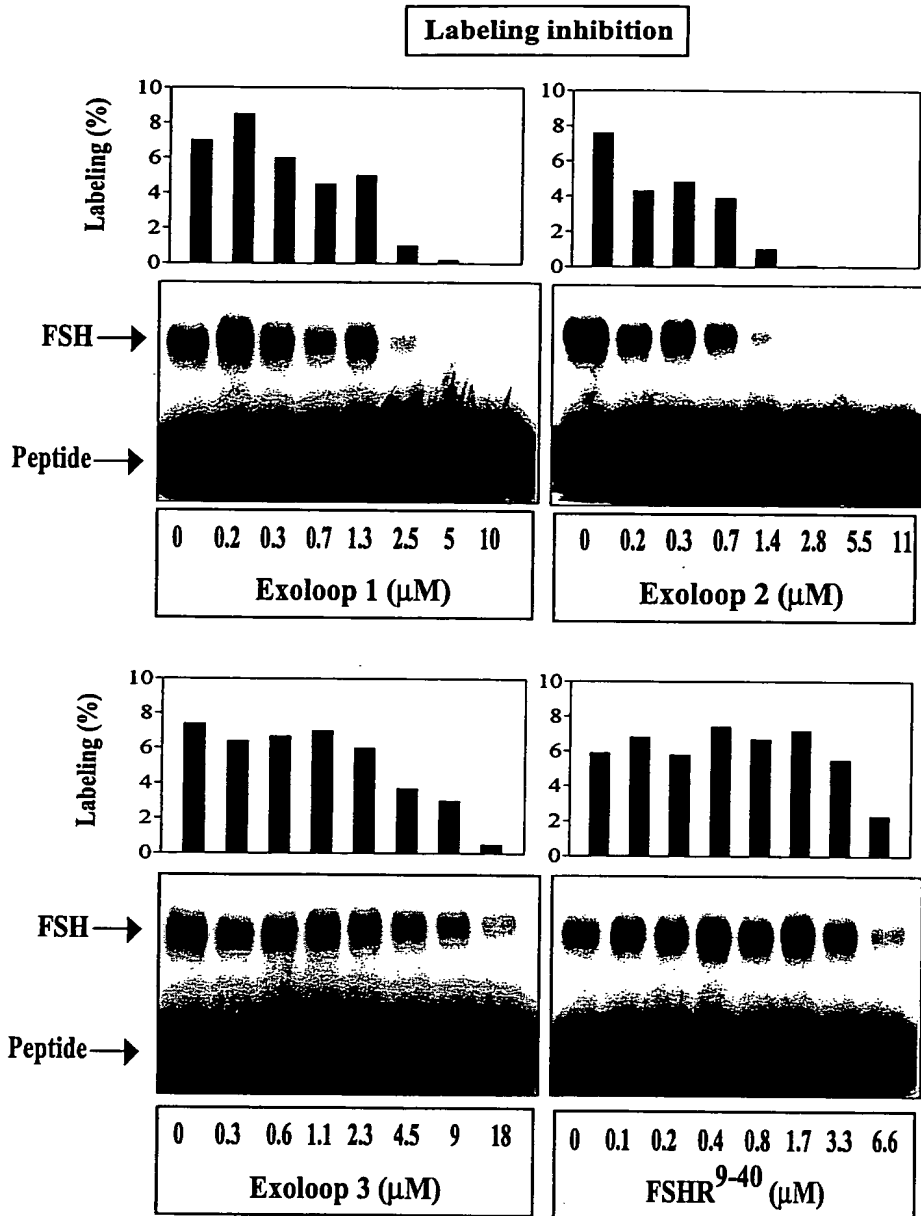


FIG. 18

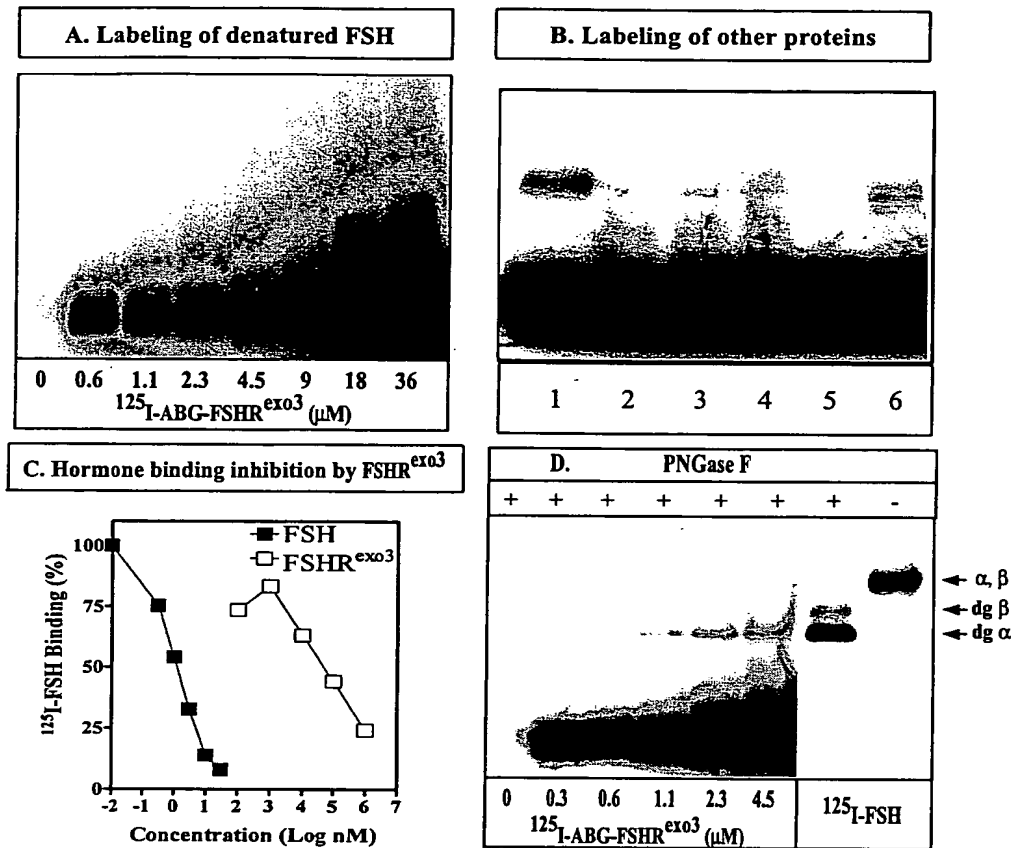


FIG. 19

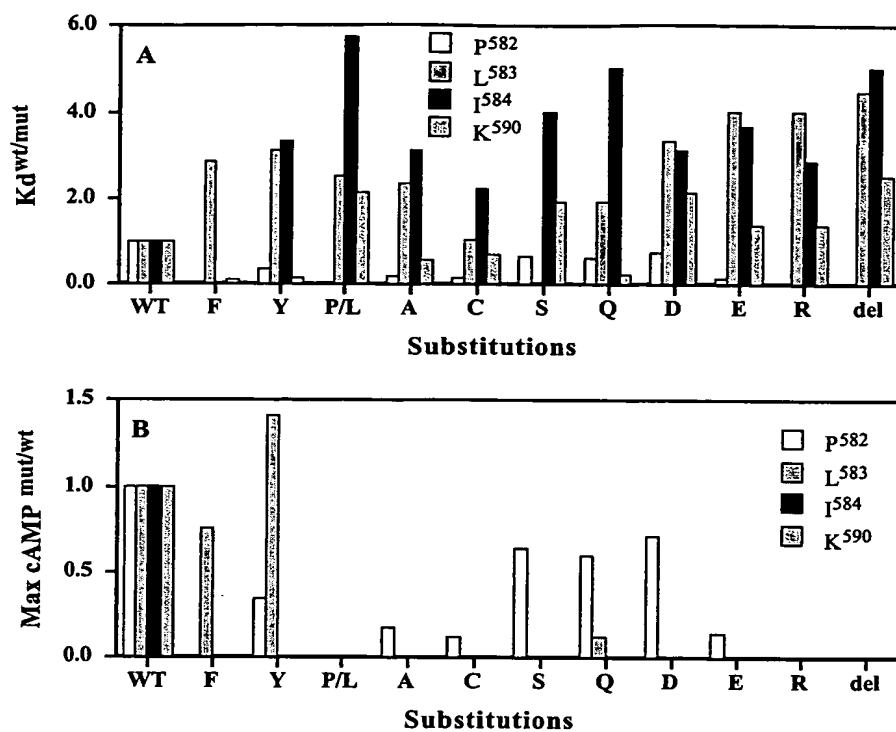
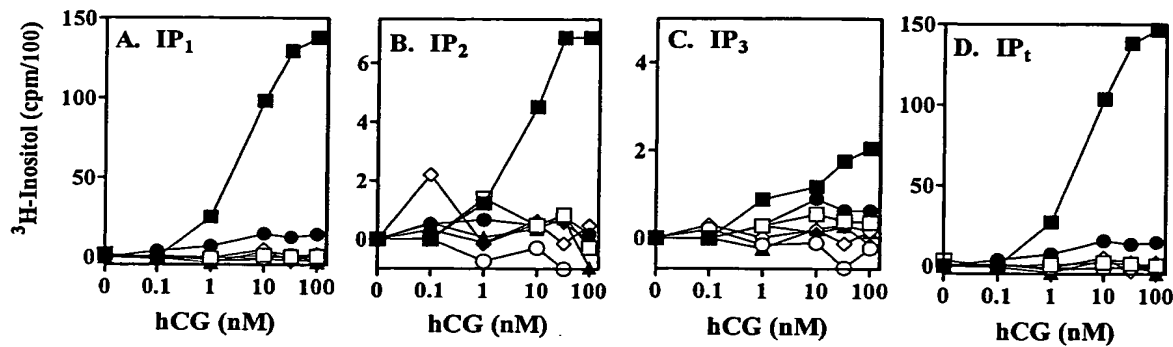
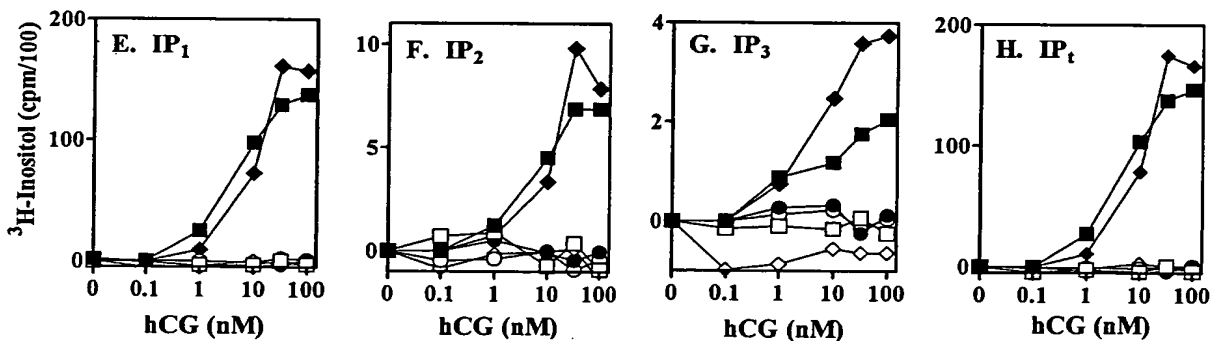


FIG. 20



IP <sub>1</sub> (cpm)	IP <sub>2</sub> (cpm)		IP <sub>3</sub> (cpm)	IP <sub>4</sub> (cpm)
13,780 ± 1,670	700 ± 120	■ Wildtype	207 ± 20	14,560 ± 1,560
NS	NS	□ K <sup>573</sup> A	NS	NS
2,110 ± 145	180 ± 20	● V <sup>574</sup> A	80 ± 20	2,230 ± 370
NS	NS	○ P <sup>575</sup> A	NS	NS
NS	NS	◆ L <sup>576</sup> A	NS	NS
NS	NS	◇ I <sup>577</sup> A	NS	NS
NS	NS	▲ T <sup>578</sup> A	NS	NS



IP <sub>1</sub> (cpm)	IP <sub>2</sub> (cpm)		IP <sub>3</sub> (cpm)	IP <sub>4</sub> (cpm)
13,780 ± 1,670	700 ± 120	■ Wildtype	207 ± 20	14,560 ± 1,560
NS	NS	□ V <sup>579</sup> A	NS	NS
NS	NS	● T <sup>580</sup> A	NS	NS
NS	NS	○ N <sup>581</sup> A	NS	NS
15,070 ± 4340	900 ± 280	◆ S <sup>582</sup> A	386 ± 50	16,150 ± 4,800
NS	NS	◇ K <sup>583</sup> A	NS	NS
NS	NS	▲ pcDNA3	NS	NS

FIG. 21

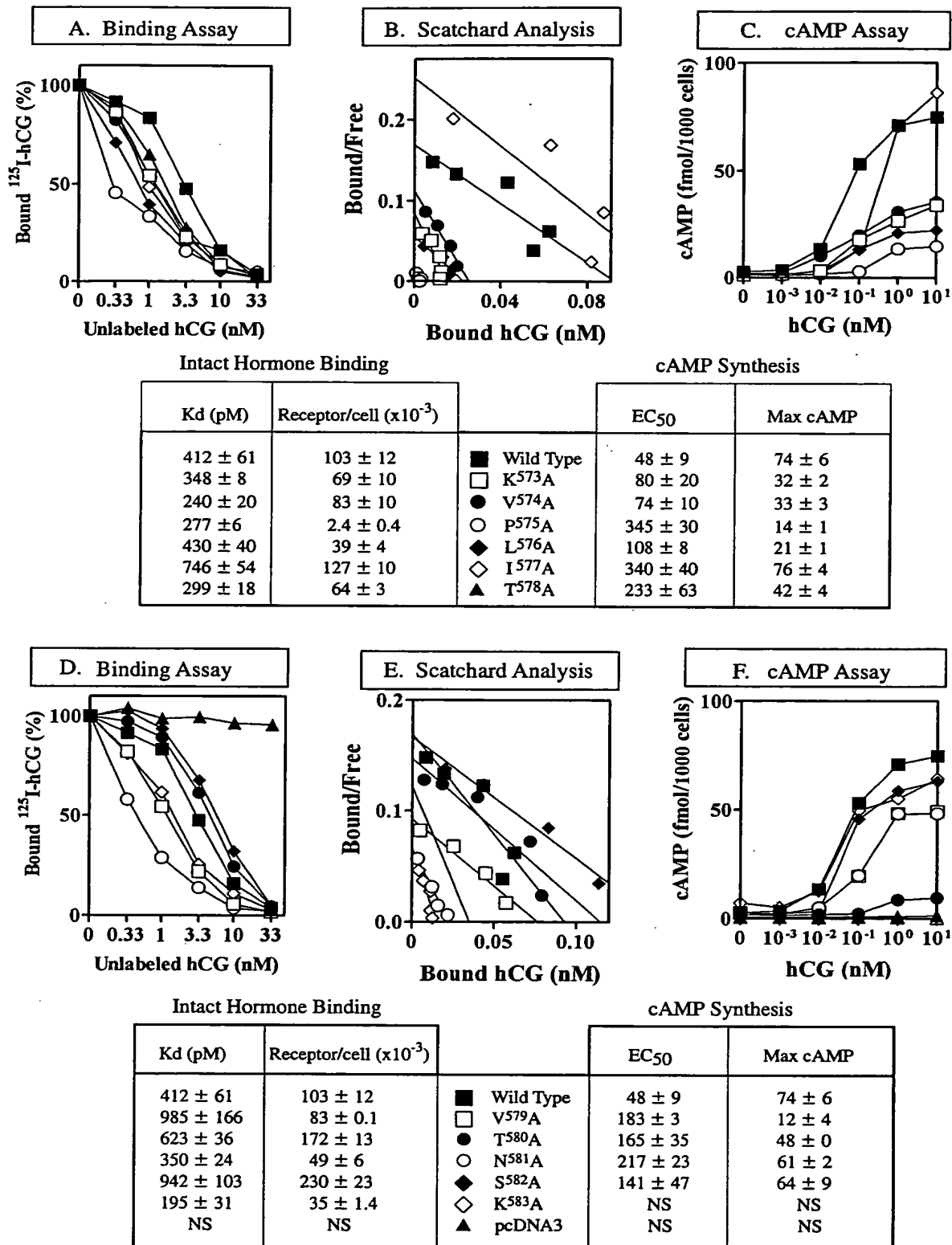


FIG. 22

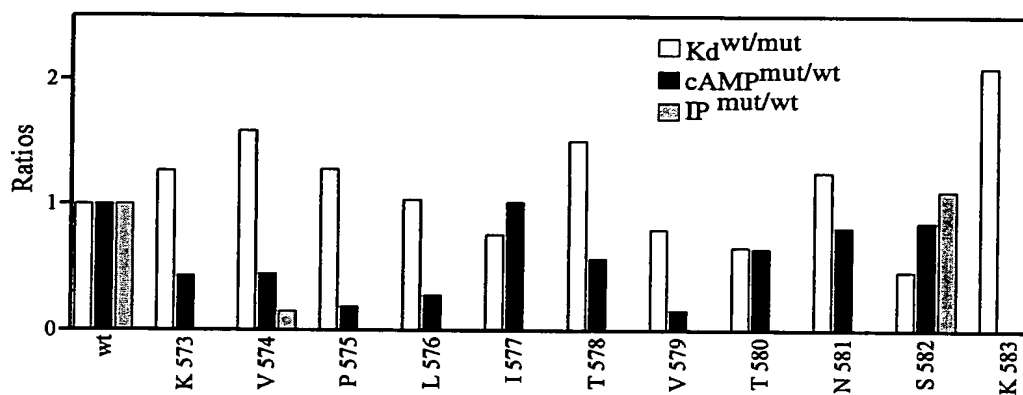


FIG. 23

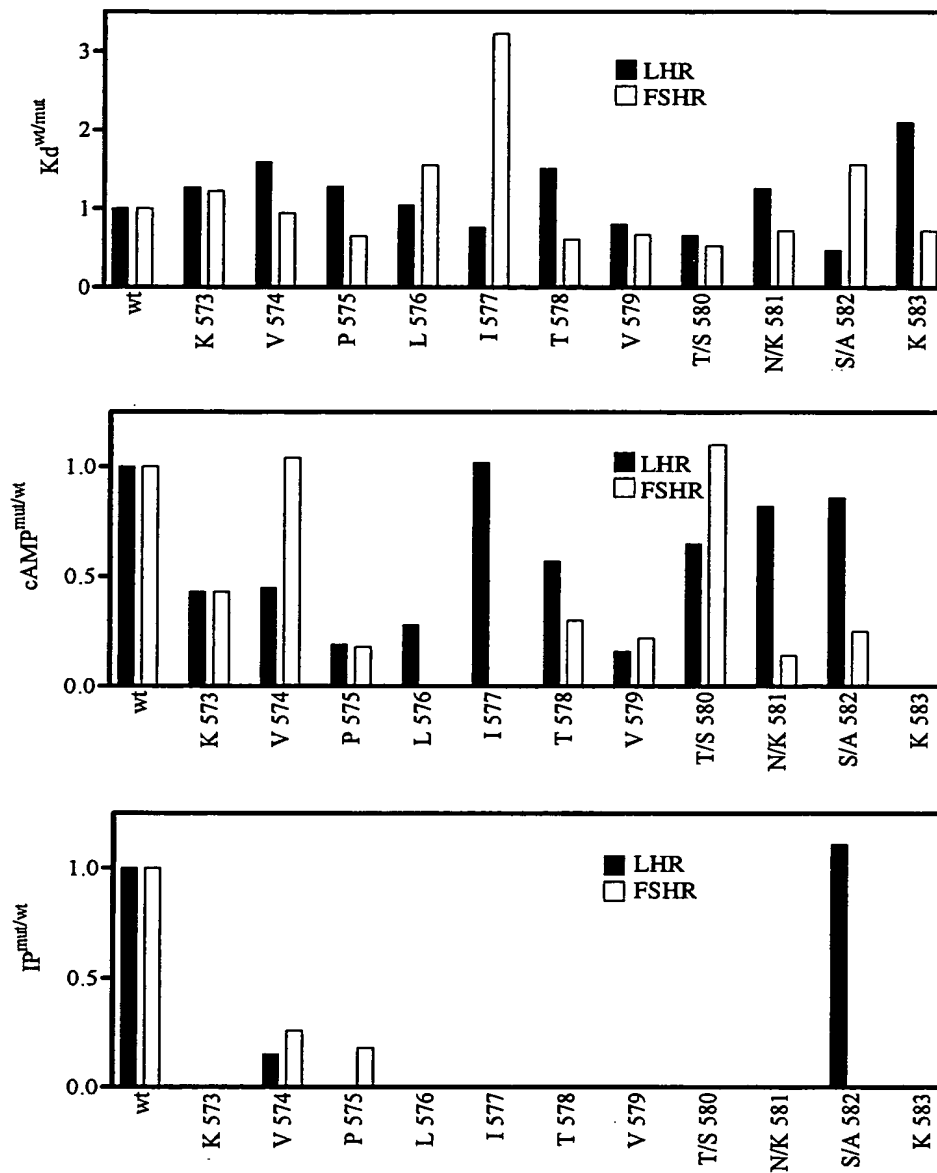


FIG. 24



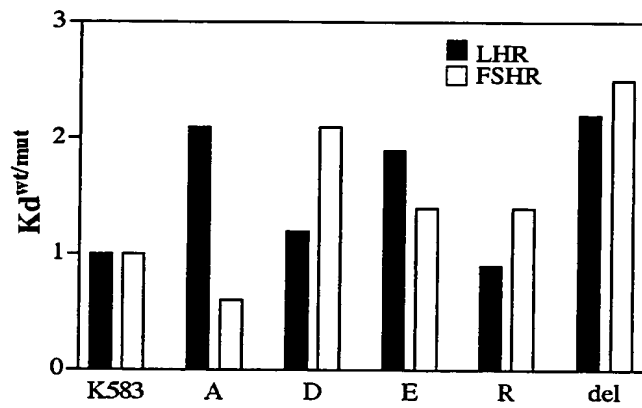


FIG. 25

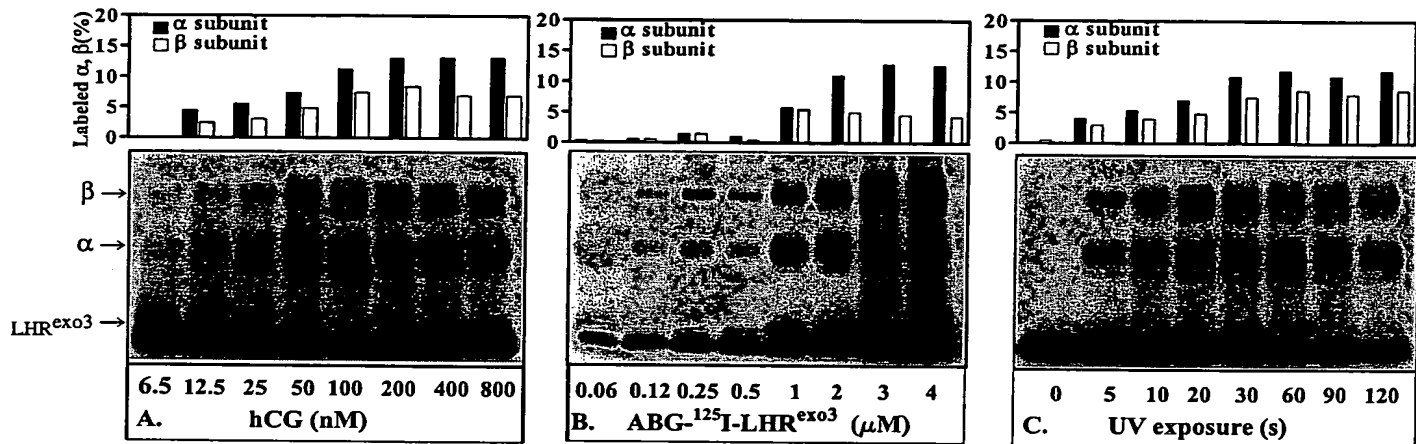


FIG. 26

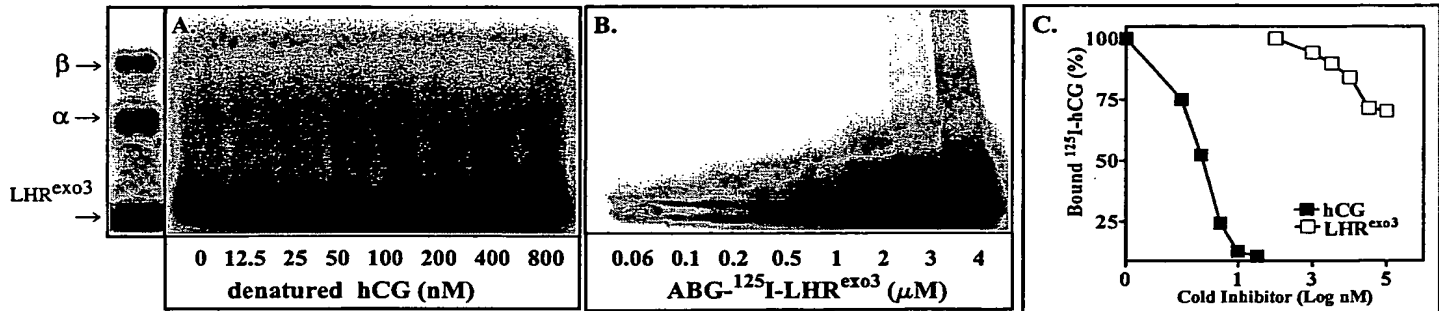


FIG. 27

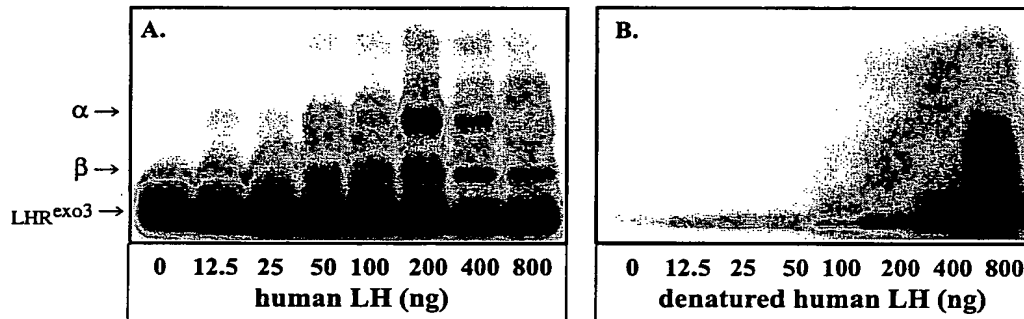


FIG. 28

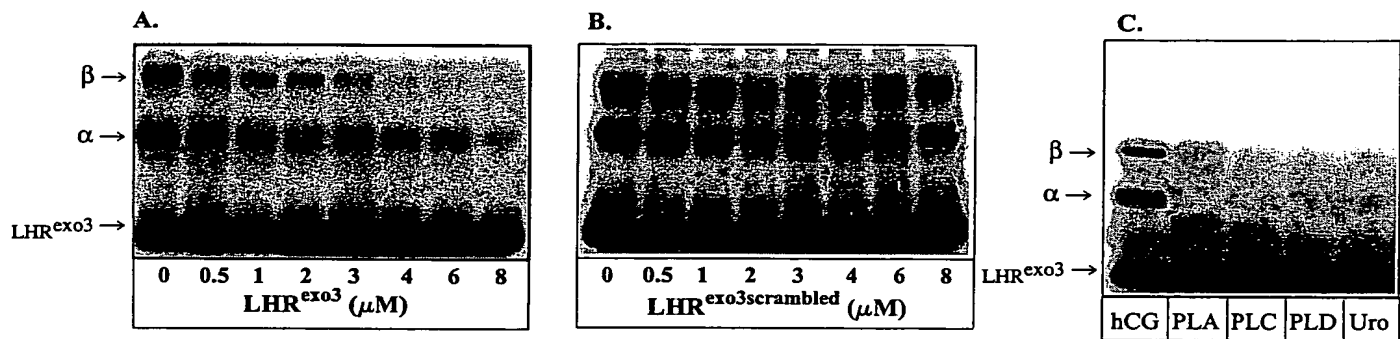


FIG. 29

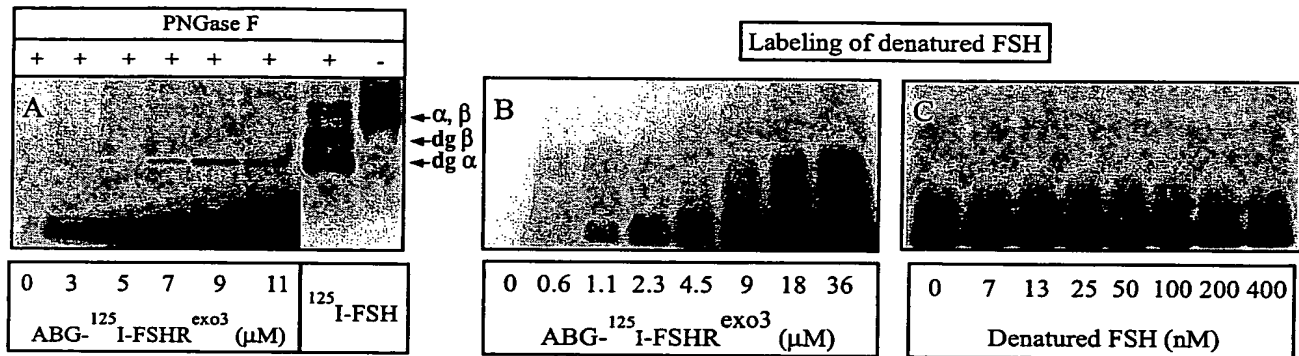


FIG. 30

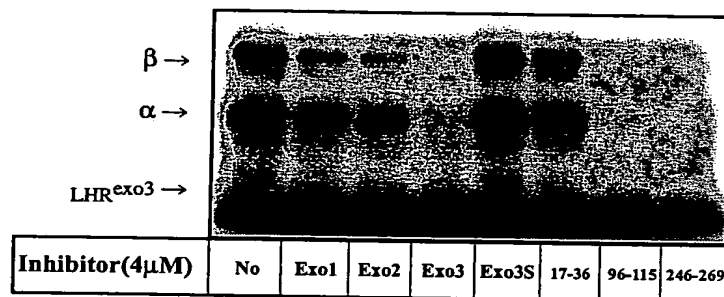


FIG. 31